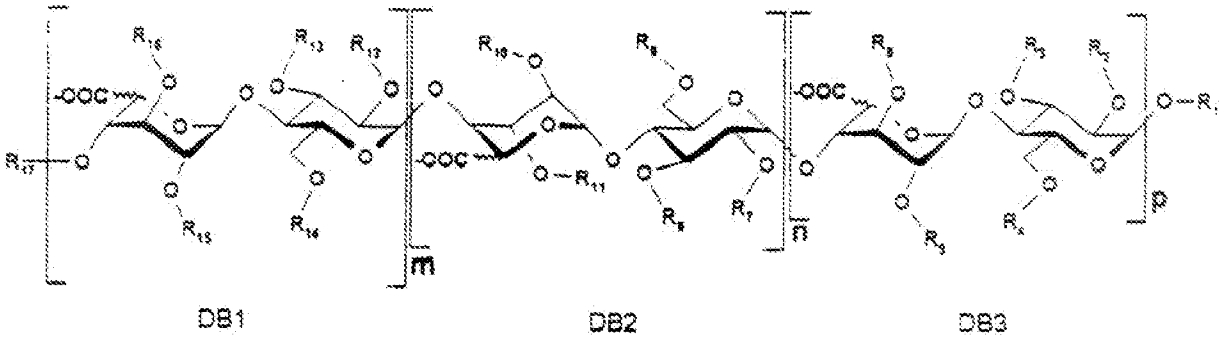
Listing of Claims:

Claim 1. (Previously presented): A synthetic polysaccharide containing from 8 to 24 monosaccharide units comprising a sequence of disaccharides formed from a uronic acid and from a hexose, said polysaccharide having its hydroxyl groups etherified with a $(C_1\text{-}C_6)$alkyl group or esterified in the form of a sulpho group, each disaccharide being at least monoetherified; and salts thereof.

Claim 2. (Previously presented): A polysaccharide of Claim 1 having the formula:



(I)

in which

- the wavy line indicates either a bond below or above the plane of the pyranose ring;
- R_1, R_6, R_{11} and R_{16} are a $(C_1\text{-}C_6)$alkyl;
- R_2, R_3, R_4, R_5, R_7, R_8, R_9, R_{10}, R_{12}, R_{13}, R_{14}, R_{15} and R_{17} are a $(C_1\text{-}C_6)$alkyl or an SO_3^- group;
- m, n and p are such that the sum $m + n + p$ is greater than or equal to 4 and less than or equal to 12, one or two of the three being able to be zero;

and the salts thereof and the acids corresponding thereto.

Claim 3. (Previously presented): A polysaccharide according to Claim 10 in which the cation is selected from sodium and potassium.

Claim 4. (Previously presented): A polysaccharide of Claim 2 wherein the alkyls are methyls and the salts thereof and the acids corresponding thereto.

Claim 5. (Previously presented): A polysaccharide of Claim 2 wherein n and p are equal to zero and the salts thereof and the acids corresponding thereto.

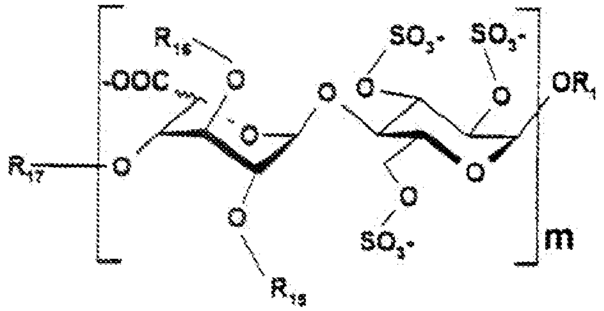
Claim 6. (Previously presented): A polysaccharide of Claim 2 wherein n and p are equal to zero and m is 4 to 10 and the salts thereof and the acids corresponding thereto.

Claim 7. (Previously presented): A polysaccharide of Claim 2 wherein n and p are equal to zero, m is 4 to 10; at least one of the substituents R_{12}, R_{13}, R_{14} and R_{15} is a sulphate group; R_1 and R_{16} are a $(C_1\text{-}C_6)$alkyl and R_{17} is a $(C_1\text{-}C_6)$alkyl or an SO_3^- group and the salts thereof and the acids corresponding thereto.

Claim 8. (Previously presented): A polysaccharide of Claim 2 wherein n and p are equal to zero, m is 4 to 10; at least two of the substituents R_{12}, R_{13}, R_{14} and R_{15} are a sulphate group; R_1 and R_{16} are a $(C_1\text{-}C_6)$alkyl and $R_{17}$is a $(C_1\text{-}C_6)$alkyl or an SO_3^- group and the salts thereof and the acids corresponding thereto.

Claim 9. (Previously presented): A polysaccharide of Claim 2 wherein n and p are equal to zero, m is 4 to 10; at least three of the substituents R_{12}, R_{13}, R_{14} and R_{15} are a sulphate group; R_1 and R_{16} are a $(C_1\text{-}C_6)$alkyl and R_{17} is a $(C_1\text{-}C_6)$alkyl or an SO_3^- group and the salts thereof and the acids corresponding thereto.

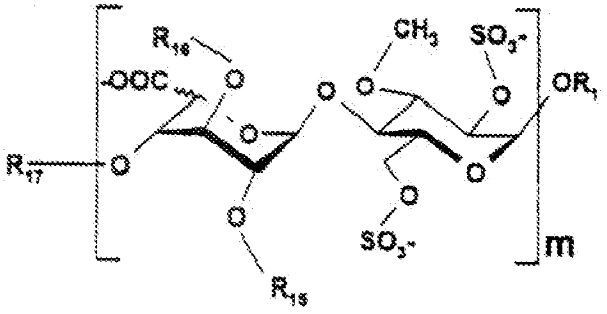
Claim 10. (Previously presented): A polysaccharide according to Claim 2 formed from an anion and from a cation, wherein the anion has the formula (I.1):



(I.1)

in which m is 4 to 10; R_1 and R_{16} are a $(C_1\text{-}C_6)$alkyl and R_{15} and R_{17} are a $(C_1\text{-}C_6)$alkyl or an SO_3^- group, each uronic acid being either an iduronic or glucuronic acid; and the cation is a pharmaceutically acceptable monovalent cation; and the salts thereof and the acids corresponding thereto.

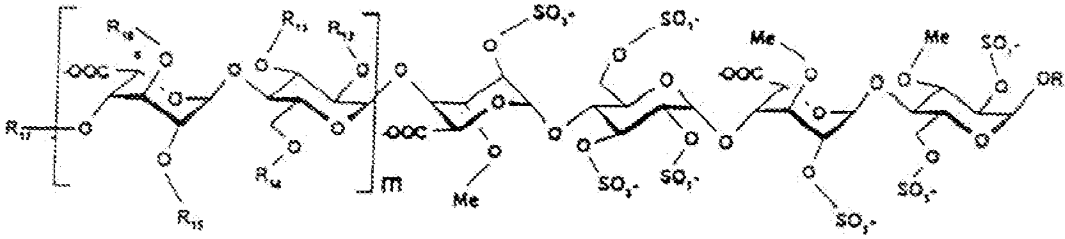
Claim 11. (Previously presented): A polysaccharide according to Claim 2 formed from an anion and from a cation, wherein the anion has the formula (I.2):



(I.2)

in which m is 4 to 10; R_1 and R_{16} are a $(C_1\text{-}C_6)$alkyl and R_{15} and R_{17} are a $(C_1\text{-}C_6)$alkyl or an SO_3^- group, each uronic acid being either an iduronic or glucuronic acid; and the cation is a pharmaceutically acceptable monovalent cation; and the salts thereof and the acids corresponding thereto.

Claim 12. (Previously presented): A polysaccharide according to Claim 2 formed from an anion and from a cation, wherein the anion has the formula (I.3):



(I.3)

in which m is 2 or 3; R_1 and R_{16} are a $(C_1\text{-}C_6)$alkyl and R_{12}, R_{13}, R_{14}, R_{15} and R_{17} are a $(C_1\text{-}C_6)$alkyl or an SO_3^- group, each uronic acid being either an iduronic or glucuronic acid; and the cation is a pharmaceutically acceptable monovalent cation; as well as the salts thereof and the acids corresponding thereto.

Claim 13. (Previously presented): A polysaccharide according to Claim 12 in which R_1 is a methyl, R_{13} in position 3 of the glucose is a methyl, R_{12} in position 2 and R_{14} in position 6 of the glucose are an SO_3^- and R_{16} in position 3 of the iduronic or glucuronic unit is a methyl, and m is equal to 2 or 3.

Claim 14. (Previously presented): A polysaccharide chosen from the group consisting of:

methyl (1-4)-*O*-(2,3-di-*O*-methyl-4-*O*-sulpho-α-L-idopyranosyluronic acid)-[(1-4)-*O*-(2,3,6-tri-*O*-sulpho-α-D-glucopyranosyl)-(1-4)-*O*-(2,3-di-*O*-methyl-α-L-idopyranosyluronic acid)]$_9$-2,3,6-tri-*O*-sulpho-α-D-glucopyranoside, sodium salt,

methyl (1-4)-*O*-(2,3-di-*O*-methyl-4-*O*-sulpho-α-L-idopyranosyluronic acid)-[(1-4)-*O*-(2,3,6-tri-*O*-sulpho-α-D-glucopyranosyl)-(1-4)-*O*-(2,3-di-*O*-methyl-α-L-idopyranosyluronic acid)]$_4$-2,3,6-tri-*O*-sulpho-α-D-glucopyranoside, sodium salt,

methyl (1-4)-*O*-(2,3-di-*O*-methyl-4-*O*-sulpho-α-L-idopyranosyluronic acid)-[(1-4)-*O*-(2,3,6-tri-*O*-sulpho-α-D-glucopyranosyl)-(1-4)-*O*-(2,3-di-*O*-methyl-α-L-idopyranosyluronic acid)]$_5$-2,3,6-tri-*O*-sulpho-α-D-glucopyranoside, sodium salt,

methyl (1-4)-*O*-(2,3-di-*O*-methyl-4-*O*-sulpho-α-L-idopyranosyluronic acid)-[(1-4)-*O*-(2,3,6-tri-*O*-sulpho-α-D-glucopyranosyl)-(1-4)-*O*-(2,3-di-*O*-methyl-α-L-idopyranosyluronic acid)]$_6$-2,3,6-tri-*O*-sulpho-α-D-glucopyranoside, sodium salt,

methyl (1-4)-*O*-(2,3-di-*O*-methyl-4-*O*-sulpho-α-L-idopyranosyluronic acid)-[(1-4)-*O*-(2,3,6-tri-*O*-sulpho-α-D-glucopyranosyl)-(1-4)-*O*-(2,3-di-*O*-methyl-α-L-idopyranosyluronic acid)]$_7$-2,3,6-tri-*O*-sulpho-α-D-glucopyranoside, sodium salt,

methyl (1-4)-*O*-(2,3-di-*O*-methyl-4-*O*-sulpho-α-L-idopyranosyluronic acid)-[(1-4)-*O*-(2,3,6-tri-*O*-sulpho-α-D-glucopyranosyl)-(1-4)-*O*-(2,3-di-*O*-methyl-α-L-idopyranosyluronic acid)]$_8$-2,3,6-tri-*O*-sulpho-α-D-glucopyranoside, sodium salt,

methyl (1-4)-*O*-(2,3-di-*O*-methyl-4-*O*-sulpho-β-D-glucopyranosyluronic acid)-[(1-4)-*O*-(2,3,6-tri-*O*-sulpho-α-D-glucopyranosyl)-(1-4)-*O*-(2,3-di-*O*-methyl-β-D-glucopyranosyluronic acid)]$_4$-2,3,6-tri-*O*-sulpho-α-D-glucopyranoside, sodium salt, methyl (1-4)-*O*-(2,3-di-*O*-methyl-4-*O*-sulpho-β-D-glucopyranosyluronic acid)-[(1-4)-*O*-(2,3,6-tri-*O*-sulpho-α-D-glucopyranosyl)-(1-4)-*O*-(2,3-di-*O*-methyl-β-D-glucopyranosyluronic acid)]$_3$-2,3,6-tri-*O*-sulpho-α-D-glucopyranoside, sodium salt,

methyl (1-4)-*O*-(3-*O*-methyl-2,4-di-*O*-sulpho-α-L-idopyranosyluronic acid)-[(1-4)-*O*-(3-*O*-methyl-2,6-di-*O*-sulpho-α-D-glucopyranosyl)-(1-4)-*O*-(3-*O*-methyl-2-*O*-sulpho-α-L-idopyranosyluronic acid)]$_4$-3-*O*-methyl-2,6-di-*O*-sulpho-α-D-glucopyranoside, sodium salt,

methyl (1-4)-*O*-(3-*O*-methyl-2,4-di-*O*-sulpho-α-L-idopyranosyluronic acid)-[(1-4)-*O*-(3-*O*-methyl-2,6-di-*O*-sulpho-α-D-glucopyranosyl)-(1-4)-*O*-(3-*O*-methyl-2-*O*-sulpho-α-L-idopyranosyluronic acid)]$_3$-3-*O*-methyl-2,6-di-*O*-sulpho-α-D-glucopyranoside, sodium salt,

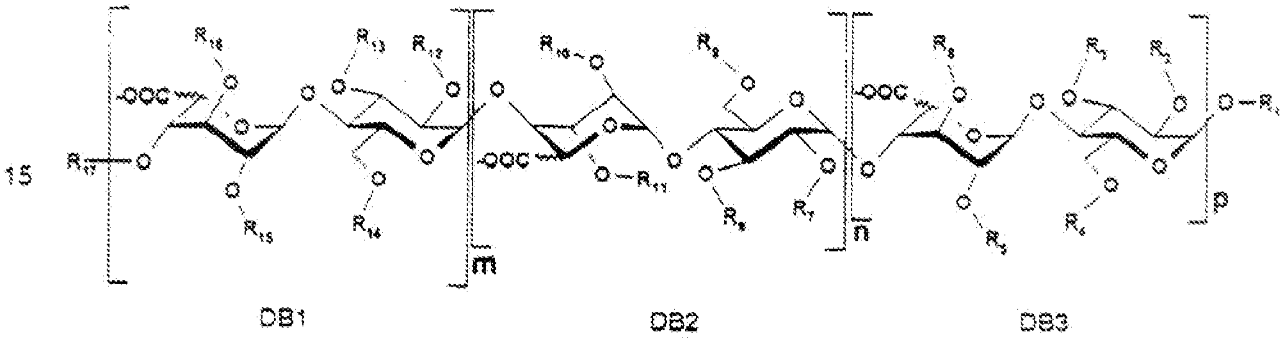
methyl *O*-(3-*O*-methyl-2,4-di-*O*-sulpho-α-L-idopyranosyluronic acid)-[(1-4)-*O*-(3-*O*-methyl-2,6-di-*O*-sulpho-α-D-glucopyranosyl)-(1-4)-*O*-(3-*O*-methyl-2-*O*-sulpho-α-L-idopyranosyluronic acid)(1-4)-]$_5$-3-*O*-methyl-2,6-di-*O*-sulpho-α-D-glucopyranoside, sodium salt,

methyl (1-4)-*O*-(3-*O*-methyl-2,4-di-*O*-sulpho-β-D-glucopyranosyluronic acid)-[(1-4)-*O*-(3-*O*-methyl-2,6-di-*O*-sulpho-α-D-glucopyranosyl)-(1-4)-*O*-(3-*O*-methyl-2-*O*-sulpho-β-D-glucopyranosyluronic acid)]$_4$-3-*O*-methyl-2,6-di-*O*-sulpho-α-D-glucopyranoside, sodium salt,

methyl (1-4)-*O*-(3-*O*-methyl-2,4-di-*O*-sulpho-α-L-idopyranosyluronic acid)-[(1-4)-*O*-(3-*O*-methyl-2,6-di-*O*-sulpho-α-D-glucopyranosyl)-(1-4)-*O*-(3-*O*-methyl-2-*O*-sulpho-α-L-idopyranosyluronic acid)]$_2$-*O*-(2,3,6-tri-*O*-sulpho-α-D-glucopyranosyl)-(1-4)-*O*-(3-(1-4)-*O*-methyl-2-*O*-sulpho-α-L-idopyranosyluronic acid)-3-*O*-methyl-2,6-di-*O*-sulpho-α-D-glucopyranoside, sodium salt, and

methyl (1-4)-*O*-(3-*O*-methyl-2,4-di-*O*-sulpho-α-L-idopyranosyluronic acid)-[(1-4)-*O*-(3-*O*-methyl-2,6-di-*O*-sulpho-α-D-glucopyranosyl)-(1-4)-*O*-(3-*O*-methyl-2-*O*-sulpho-α-L-idopyranosyluronic acid)]$_3$-(1-4)-*O*-(2,3,6-tri-*O*-sulpho-α-D-glucopyranosyl)-(1-4)-*O*-(3-*O*-methyl-2-*O*-sulpho-α-L-idopyranosyluronic acid)-3-*O*-methyl-2,6-di-*O*-sulpho-α-D-glucopyranoside, sodium salt.

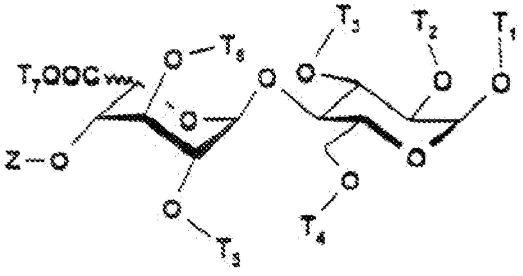
Claim 15. (Previously presented): A process for the preparation of compounds of formula (I):



(I)

comprising the steps of:

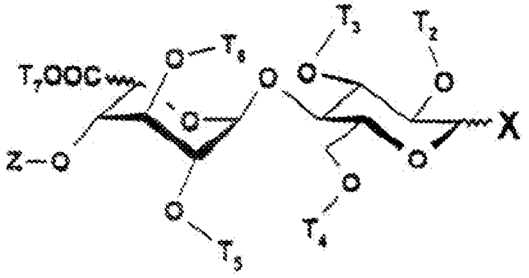
(a) coupling a glycosidic link donor monosaccharide to a glycosidic link acceptor monosaccharide according to the classical methods of sugar chemistry to obtain an intermediate saccharide synthon of completely protected disaccharide type of formula (A):



(A)

in which the identical or different T_1, T_2, T_3, T_4, T_5, T_6, T_7 and Z substituents are selected from the protective groups used in sugar chemistry as permanent, semi-permanent or temporary protective groups,

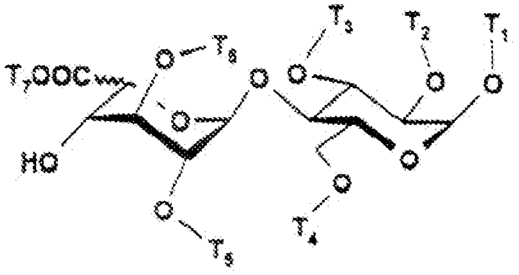
(b) chemically modifying the disaccharide of formula (A) above to obtain an intermediate saccharide synthon of glycosidic link donor disaccharide type of formula (B):



(B)

in which T_2 to T_7 and Z are as defined above for (A) and X is an activating group of the anomeric carbon, then

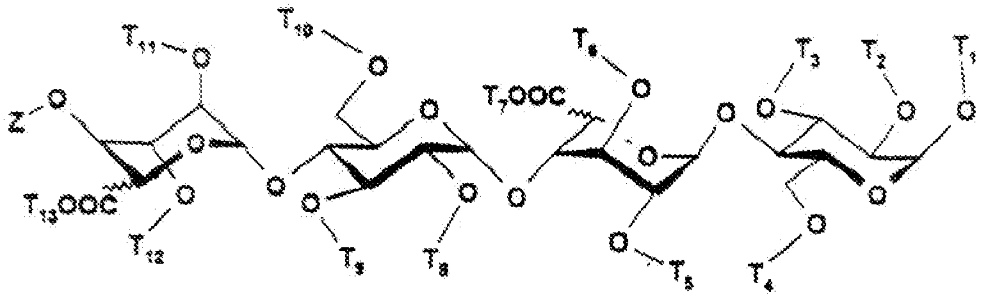
(c) chemically modifying the disaccharide of formula (A) above to obtain an intermediate saccharide synthon of glycoside link acceptor disaccharide type of formula (C),



(C)

in which T_1 to T_7 are such as defined above for (A), by selectively eliminating the protective group Z according to classical methods of sugar chemistry, then

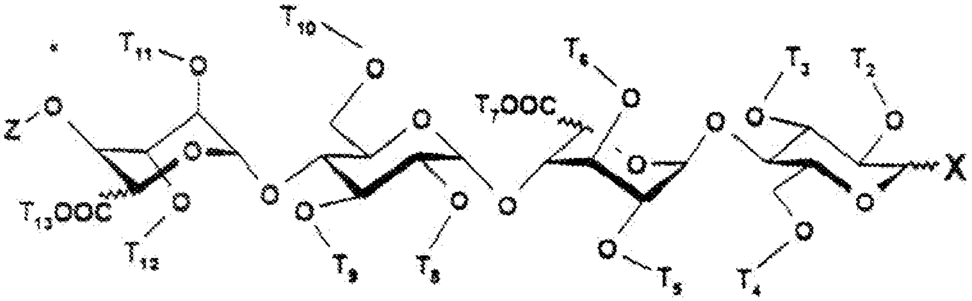
(d) coupling a glycosidic link donor disaccharide of formula (B) obtained above and a glycosidic link acceptor disaccharide of formula (C) obtained above to obtain a completely protected tetrasaccharide of formula (D):



(D)

in which T_1 to T_7 and Z are such as defined above for (A) and T_8, T_9, T_{10}, T_{11}, T_{12} and T_{13} are such as defined for T_2 to T_7 then,

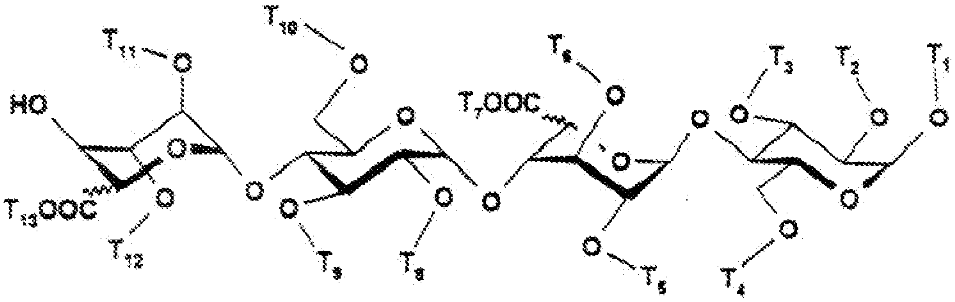
(e) chemically modifying the intermediate saccharide synthon of tetrasaccharide type of formula (D) to obtain an intermediate saccharide synthon of glycosidic link donor tetrasaccharide type of formula (E):



(E)

in which X has the same definition as for (B) and T_2 to T_{13} are such as defined for (D) then,

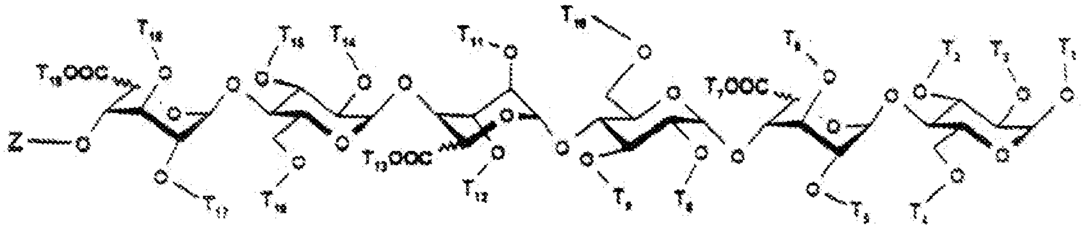
(f) selectively deprotecting the tetrasaccharide of formula (D) to obtain a glycosidic link acceptor tetrasaccharide of formula (F):



(F)

in which T_1 to T_{13} are such as defined above for (D) then,

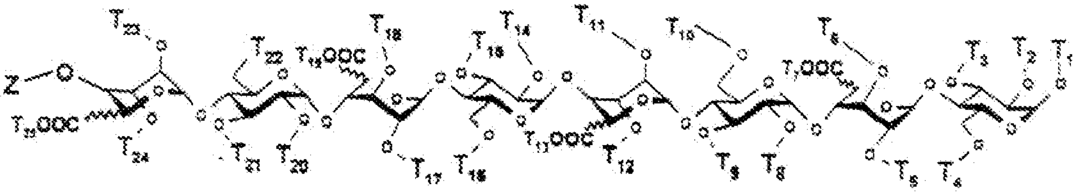
(g) coupling the glycosidic link acceptor tetrasaccharide of formula (F) and a glycosidic link donor disaccharide of formula (B) such as those obtained above to form an intermediate synthon of completely protected hexasaccharide type of formula (G):



(G)

in which T_1 to T_{13} are such as defined above for (D) and T_{14} to T_{19} are such as defined for T_2 to T_7 for (B);

or coupling the glycosidic link acceptor tetrasaccharide of formula (F) and a glycosidic link donor tetrasaccharide of formula (E) to obtain a completely protected octasaccharide of formula (H):



(H)

in which T_1 to T_{19} and Z are such as defined previously and T_{20} to T_{25} are such as defined for T_2 to T_7 for (B) then,

(h) chemically modifying the hexasaccharide of formula (G) or the octasaccharide of formula (H) obtained above to obtain an intermediate synthon of glycosidic link acceptor hexasaccharide type of formula (G) in which Z is hydrogen or else a glycosidic link acceptor octasaccharide of formula (H) in which Z is hydrogen,

(i) repeating the above deprotection and coupling steps until the completely protected oligosaccharide having the desired structure is obtained, the glycosyl donor and glycosyl acceptor intermediate saccharide synthons being chosen as a function of the final structure to thus obtain the protected precursor of the desired final polysaccharide of formula (I), in which the nature of the protective substituents determines the position of the alkyl and sulphate groups on the final product (I), and

(j) deprotecting the alcohol functions which must be sulphated by eliminating the substituents T_1 to T_{25} which protected the functions in the course of the steps of elaboration of the skeleton, then, finally

(k) carrying out the sulphation to obtain the compounds (I), or one of their salts.

Claim 16. (Previously presented): A pharmaceutical composition containing a polysaccharide or salt thereof according to Claim 1 in-combination with an inert, non-toxic, pharmaceutically acceptable excipient.

Claim 17. (Previously presented): A pharmaceutical composition according to Claim 16, in the form of a dosage unit.

Claim 18. (Previously presented): A pharmaceutical composition according to Claim 17 in which each dosage unit contains from 0.1 to 100 mg of the polysaccharide.

Claim 19. (Previously presented): A pharmaceutical composition according to Claim 18 in which each dosage unit contains from 0.5 to 50 mg of the polysaccharide.

Claim 20. (Currently amended): ~~Pharmaceutical~~ A pharmaceutical composition comprising the polysaccharide of Claim 1 in combination with another active ingredient selected from the group consisting of an antithrombotic or anticoagulant agent, platelet aggregation inhibitor and antagonist of the glycoprotein IIb/IIIa complex.

Claim 21. (Currently amended): ~~Pharmaceutical~~ A pharmaceutical composition according to Claim 20 wherein the other active ingredient is dipyridamole, aspirin, ticlopidine or clopidogrel.

Claims 22-24 (Cancelled)

Claim 25. (Withdrawn) A method for treating pathologies dependent on a coagulation dysfunction comprising administering the polysaccharide of Claim 1.

Claim 26. (Withdrawn) A method of inhibiting growth factors shown by an inhibition of cell proliferation comprising administering the polysaccharide of Claim 1.

Claim 27. (Previously presented) The polysaccharide according to Claim 11 in which the cation is selected from sodium and potassium.

Claim 28. (Previously presented) The polysaccharide according to Claim 12 in which the cation is selected from sodium and potassium.

Claim 29. (Previously presented) A method of treating pathologies dependent on a coagulation dysfunction comprising administering to a patient in need of such treatment a polysaccharide according to Claim 14.